Q1, What will be the output of the following code snippet?

def func(a, b): return b if a == 0 else func(b % a, a) print(func(30, 75))

 a) 10

 b) 20

c) 15

 d) 0

Ans.def func(a, b):

   return b if a == 0 else func(b % a, a)

print(func(30, 75))

When we run this code the out put will be option © 15

Q 2. numbers = (4, 7, 19, 2, 89, 45, 72, 22) sorted_numbers = sorted(numbers) even = lambda a: a % 2 == 0 even_numbers = filter(even, sorted_numbers) print(type(even_numbers)) a) Int b) Filter c) List d) Tuple

Ans. numbers is a tuple containing integers.

sorted_numbers sorts the elements of numbers.

even is a lambda function that returns True if a number is even (divisible by 2).

even_numbers uses filter() to apply the even function to each element of sorted_numbers, filtering out only the even numbers.

print(type(even_numbers)) prints the type of even_numbers.

The output of the code will be:

b) Filter

Q.3 As what datatype are the *args stored, when passed into a) Tuple b) List c) Dictionary d) none

Ans. When you pass *args into a function in Python, the arguments are stored as a tuple.

So, the correct answer is:

a) Tuple

Q.4. set1 = {14, 3, 55} set2 = {82, 49, 62} set3={99,22,17} print(len(set1 + set2 + set3)) a) 105 b) 270 c) 0 d) Error

Ans. set1 = {14, 3, 55}

set2 = {82, 49, 62}

set3 = {99, 22, 17}

combined_set = set1.union(set2, set3) # Merge all sets into one

print(len(combined_set))

This will output:

b) 270

Q. 5. What keyword is used in Python to raise exceptions? a) raise b) try c) goto d) except

Ans. The keyword used in Python to raise exceptions is:

a) raise

 Q. 6. Which of the following modules need to be imported to handle date time computations in Python? a) timedate b) date c) datetime d) time

Ans. The correct answer is:

c) datetime

Q.7. What will be the output of the following code snippet? print(4**3 + (7 + 5)**(1 + 1)) a) 248 b) 169 c) 208 d) 233

Ans . Let's break down the expression:

4**3 equals 64.

(7 + 5) equals 12.

(1 + 1) equals 2.

So, the expression simplifies to:

print(64 + 12**2)

Then:

12**2 equals 144.

So, the expression simplifies further to:

print(64 + 144)

Which equals 208.

Therefore, the output of the code snippet is:

c) 208

Q.8. Which of the following functions converts date to corresponding time in Python? a) strptime b) strftime c) both a) and b) d) None

Ans. The answer is:

   a) Strptime

Q.9. The python tuple is _____ in nature. a) mutable b)immutable c)unchangeable d) none

Ans. The correct answer is:

b) immutable

Q.10. The ___ is a built-in function that returns a range object that consists series of integer numbers, which we can iterate using a for loop. A. range() B. set() C. dictionary{} D. None of the mentioned above

Ans. The correct answer is:

A. range()

Q.11. Amongst which of the following is a function which does not have any name? A. Del function B. Show function C. Lambda function D. None of the mentioned abov

Ans . The correct is:

C. Lambda function

Q.12 . The module Pickle is used to ___. A. Serializing Python object structure B. De-serializing Python object structure C. Both A and B D. None of the mentioned above

Ans. The correct answer is:

C. Both A and B

Q.13, Amongst which of the following is / are the method of convert Python objects for writing data in a binary file? A. set() method B. dump() method C. load() method D. None of the mentioned above

Ans.
The correct answer is:

B. dump() method

Q.14. Amongst which of the following is / are the method used to unpickling data from a binary file? A. load() B. set() method C. dump() method D. None of the mentioned above

Ans . The correct answer is:

   A.   load()

Q.15. A text file contains only textual information consisting of ___. A. Alphabets B. Numbers C. Special symbols D. All of the mentioned above

Ans . The correct answer is:

D. All of the mentioned above

Q.16. Which Python code could replace the ellipsis (...) below to get the following output? (Select all that apply.) captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", } Enterprise Picard, Voyager Janeway Defiant Sisko

a) for ship, captain in captains.items(): print(ship, captain) b) for ship in captains: print(ship, captains[ship]) c) for ship in captains: print(ship, captains) d) both a and b

Ans. captains = {

   "Enterprise": "Picard",

   "Voyager": "Janeway",

   "Defiant": "Sisko",

}

for ship, captain in captains.items():

   print(ship, captain)

This will output:

Enterprise Picard

Voyager Janeway

Defiant Sisko

So, the correct code to replace the ellipsis (...) is:

for ship, captain in captains.items():

   print(ship, captain)

So, the correct answer is:

d) both a and b

Q.17. Which of the following lines of code will create an empty dictionary named captains? a) captains = {dict} b) type(captains) c) captains.dict() d) captains = {}

Ans. The correct answer is:

d) captains = {}

Q.18. Now you have your empty dictionary named captains. It's time to add some data! Specifically, you want to add the key-value pairs "Enterprise": "Picard", "Voyager": "Janeway", and "Defiant": "Sisko". Which of the following code snippets will successfully add these key-value pairs to the existing captains dictionary? a) captains{"Enterprise" = "Picard"} captains{"Voyager" = "Janeway"} captains{"Defiant" = "Sisko"} b) captains["Enterprise"] = "Picard" captains["Voyager"] = "Janeway" captains["Defiant"] = "Sisko" c) captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", } d) None of the above

Ans. The correct answer is:

captains["Enterprise"] = "Picard"

captains["Voyager"] = "Janeway"

 captains["Defiant"] = "Sisko"

Q.19. You're really building out the Federation Starfleet now! Here's what you have: captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", "Discovery": "unknown", }Now, say you want to display the ship and captain names contained in the dictionary, but you also want to provide some additional context. How could you do it? a) for item in captains.items(): print(f"The [ship] is captained by [captain].") b) for ship, captain in captains.items(): print(f"The {ship} is captained by {captain}.") c) for captain, ship in captains.items(): print(f"The {ship} is captained by {captain}.") d) All are correct

Ans .
The correct answer is:

b) for ship, captain in captains.items():

print(f"The {ship} is captained by {captain}.")

Q. 20. You've created a dictionary, added data, checked for the existence of keys, and iterated over it with a for loop. Now you're ready to delete a key from this dictionary: captains = { "Enterprise": "Picard", "Voyager": "Janeway", "Defiant": "Sisko", "Discovery": "unknown",

Ans . To delete a key from the dictionary captains, you can use the del keyword followed by the key you want to delete. In this case, to delete the key "Discovery", you would do:

del captains["Discovery"]

This removes the key-value pair associated with the key "Discovery" from the dictionary captains.

So, the answer is:

del captains["Discovery"]